

Primary Care and Mental Health Service

A Randomized Trial to Improve the Quality of Treatment for Panic and Generalized Anxiety Disorders in Primary Care

Rollman BL, Belnap BH, Mazumdar S, Houck PR, Zhu F, Gardner W, Reynolds CF 3rd, Schulberg HC, Shear MK.

Arch Gen Psychiatry. 2005 Dec;62(12):1332-41.

CONTEXT: Panic disorder and generalized anxiety disorder are prevalent in primary care, associated with poor functional outcomes, and are often unrecognized and ineffectively treated by primary care physicians.

OBJECTIVE: To examine whether telephone-based collaborative care for panic and generalized anxiety disorders improves clinical and functional outcomes more than the usual care provided by primary care physicians.

DESIGN: Randomized controlled trial.

SETTING: Four Pittsburgh area primary care practices linked by a common electronic medical record system. Patients A total of 191 adults aged 18 to 64 years with panic and/or generalized anxiety disorder who were recruited from July 2000 to April 2002. Intervention Patients were randomly assigned to a telephone-based care management intervention (n = 116) or to notification alone of the anxiety disorder to patients and their physicians (usual care, n = 75). The intervention involved non-mental health professionals who provided patients with psychoeducation, assessed preferences for guideline-based care, monitored treatment responses, and informed physicians of their patients' care preferences and progress via an electronic medical record system under the direction of study investigators.

MAIN OUTCOME MEASURES: Independent blinded assessments of anxiety and depressive symptoms, mental health-related quality of life, and employment status at baseline, 2-, 4-, 8-, and 12-month follow-up. **RESULTS:** At 12-month follow-up, intervention patients reported reduced anxiety (effect size [ES], 0.33-0.38; 95% confidence interval [CI], 0.04 to 0.67; $P \leq .02$) and depressive symptoms (ES, 0.35; 95% CI, 0.25-0.46; $P = .03$); improved mental health-related quality of life (ES, 0.39; 95% CI, 0.10 to 0.68; $P = .01$); and larger improvements relative to baseline in hours worked per week (5.7; 95% CI, 0.1 to 11.3; $P = .05$) and fewer work days absent in the past month (-2.6; 95% CI, -4.8 to -0.3; $P = .03$) than usual care patients. If working at baseline, more intervention patients than usual care patients remained working at 12-month follow-up (94% vs 79% [15% absolute difference, 0.7%-28.6%]; $P = .04$).

CONCLUSIONS: Telephone-based collaborative care for panic disorder and generalized anxiety disorder is more effective than usual care at improving anxiety symptoms, health-related quality of life, and work-related outcomes.

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Adolescent Satisfaction with Computer-Assisted Behavioural Risk Screening in Primary Care

Chisolm DJ, Gardner W, Julian T, Kelleher KJ.
Child Adolesc Mental Health 2007;13(4):163-8.

BACKGROUND: This study measures patient satisfaction with a computerized mental health and risk-behavior screening tool and predictors of satisfaction. **Method:** Youth, aged 11–20, were recruited to use a laptop-based screening system in nine primary care clinics. The study assessed correlations between satisfaction with the system and selected predictors. **Results:** Most users were satisfied with their experience. Multivariate logistic regression found perceived ease of use, perceived usefulness, and trust to be significantly associated with high satisfaction. Satisfaction was not related to computer experience or risk behavior status.

CONCLUSIONS: Adolescent patients, even those at risk, accept computer-assisted screening in primary care.

KEY PRACTITIONER MESSAGE: Screening adolescents for behavioral and mental health issues in the primary care setting is time consuming. Computer assisted screening has the potential to improve screening. This study finds that youth will accept computerized screening if the system is perceived to be useful and easy to use.

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Barriers to Mental Health Referral from Pediatric Primary Care Settings

Walders N, Childs GE, Comer D, Kelleher KJ, Drotar D.
Am J Manag Care. 2003 Oct;9(10):677-83.

OBJECTIVE: To examine the frequency of barriers to mental health referral according to pediatric primary care physician (PCP) report and to identify factors related to perceptions of referral barriers for patients with managed care coverage.

DESIGN AND METHODS: Data from a national sample of 319 PCPs were examined. Comparisons were made concerning the frequency of PCP-reported barriers to mental health referrals for patients with fee-for-service versus managed care coverage. The relationship between relevant factors (eg, practice structure, interdisciplinary office staff, availability of community mental health resources) and perceived barriers was examined for managed care coverage.

RESULTS: Barriers to mental health referrals were more commonly reported for those with managed care versus fee-for-service coverage for 11 of the 12 barriers assessed ($P < .0001$). For patients with managed care coverage a high availability of community mental health resources was associated with fewer perceived barriers among physicians ($P < .0001$).

CONCLUSIONS: Our findings suggest that PCPs perceive barriers to mental health referrals as common challenges when addressing psychosocial concerns. Referral barriers were more commonly reported for patients with managed care coverage. Increasing the availability of community mental health resources was identified as an important variable in facilitating appropriate referrals.

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Child Sex Differences in Primary Care Clinicians' Mental Health Care of Children and Adolescents

Gardner W, Pajer KA, Kelleher KJ, Scholle SH, Wasserman RC.
Arch Pediatr Adolesc Med. 2002 May;156(5):454-9.

BACKGROUND: Sex differences in the medical and mental health care of adults are well established.

OBJECTIVE: To study the effect of child patient's sex on whether primary care clinicians (PCCs), including pediatricians, family physicians, and nurse practitioners, found or treated mental health problems in primary care settings.

DESIGN: The data were collected by clinicians and parents from 21 065 individual child visits (50.3% girls) in 204 primary care practices.

METHODS: Each PCC enrolled a consecutive sample of approximately 55 children and adolescents aged 4 to 15 years. Parents filled out questionnaires, including the Pediatric Symptom Checklist, before seeing the clinician. Clinicians completed a survey after the visit about the psychosocial problems and recommended treatments, but they did not see the results of the Pediatric Symptom Checklist or any other data collected from the parents.

RESULTS: Boys were more likely to be seen for a mental health-related visit and by a clinician who identified them as "my patient." Boys with parent-reported symptom profiles that were similar to those of girls were more likely to be identified as having attention-deficit/hyperactivity problems or behavior or conduct problems and less likely to be identified as having internalizing problems. Adjusting for parent-reported symptoms, PCCs were more likely to prescribe medications for boys. Child sex differences in referrals to mental health specialists and the provision of counseling to families were not statistically significant.

CONCLUSION: There are substantial sex differences in the mental health care of children in the primary care system.

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Childhood Anxiety in a Diverse Primary Care Population: Parent-Child Reports, Ethnicity and SCARED Factor Structure

Wren FJ, Berg EA, Heiden LA, Kinnamon CJ, Ohlson LA, Bridge JA, Birmaher B, Bernal MP. J Am Acad Child Adolesc Psychiatry. 2007 Mar;46(3):332-40.

OBJECTIVE: To explore in a multiethnic primary care population the impact of child gender and of race/ethnicity on parent and child reports of school-age anxiety and on the factor structure of the Screen for Childhood Anxiety and Related Emotional Disorders (SCARED).

METHOD: A consecutive sample of 515 children (8 to <13 years) and their parent presenting for primary care completed self-report (C) and parent-report (P) versions of the SCARED-41.

RESULTS: Neither SCARED scores nor parent-child difference varied significantly with race/ethnicity. Predictors of higher SCARED scores were less parental education, younger child age and female gender. Exploratory factor analysis conducted separately for SCARED-C and SCARED-P yielded four factors. There was large variation in factor structure between SCARED-C and SCARED-P and across ethnic and gender subgroups, greatest for somatic/panic/generalized anxiety and Hispanic children.

CONCLUSIONS: Primary care triage of anxious children requires data from both the parent and child and must go beyond cross-sectional symptom inventories. Clinicians must elicit from each family their perhaps culturally bound interpretation of the child's somatic and psychological symptoms.

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Comparison of the PSC-17 and Alternative Mental Health Screens in an At-Risk Primary Care Sample

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OBJECTIVE: To validate the 17-item version of the Pediatric Symptom Checklist (PSC-17) as a screen for common pediatric mental disorders in primary care.

METHOD: Patients were 269 children and adolescents (8-15 years old) whose parents completed the PSC-17 in primary care waiting rooms. Children were later assessed using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL). The PSC-17's subscales were compared with K-SADS-PL diagnoses and measures of anxiety, depression, general psychopathology, functioning, and impairment.

RESULTS: In receiver operating characteristics analyses, the PSC-17 subscales performed as well as competing screens (Child Depression Inventory, the parent and child Screens for Child Anxiety-Related Disorders) and Child Behavior Checklist subscales (Aggressive, Anxious-Depressed, Attention, Externalizing, Internalizing, and Total) in predicting diagnoses of attention-deficit/hyperactivity disorder, externalizing disorders, and depression (area under the curve $>$ or $=0.80$). The instrument was less successful with anxiety (area under the curve $= 0.68$). None of the screens were highly sensitive, many were insensitive, and all would have low positive predictive value in low-risk primary care populations.

CONCLUSIONS: The PSC-17 and its subscales are briefer than alternative questionnaires, but performed as well as those instruments in detecting common mental disorders in primary care. Continued research is needed to develop brief yet sensitive assessment instruments appropriate for primary care.

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Correlates of Behavioral Care Management Strategies Used by Primary Care Pediatric Providers

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OBJECTIVE: To identify correlates of behavioral management strategies and to test whether children with more severe behavioral problems have care transferred to mental health specialists.

METHODS: Secondary analysis of the Child Behavior Study. Children aged 4 to 15 years were identified with new behavioral problems at nonurgent visits to primary care clinicians. Treatment strategies were categorized into mutually exclusive groups: primary care (psychotropic prescription and/or office-based counseling), mental health care (referral for or ongoing specialist mental health care), joint care (primary care and mental health care), or observation. Child-, family-, clinician-, and practice-level characteristics were assessed for association with management strategies by use of multivariate methods.

RESULTS: A total of 1377 children from 201 practices in 44 states and Puerto Rico were newly identified with behavioral problems. Behavioral/conduct (41 per cent), attentional/hyperactivity (37 per cent), adjustment (32 per cent), and emotional (22 per cent) problems were most commonly identified. Children with comorbid behavioral problems were more likely to be managed with joint care than other treatment strategies. In addition, clinicians who were male or who had greater mental health orientation were more likely to provide joint care than mental health care only.

CONCLUSIONS: Clinicians were more likely to manage new behavioral problems jointly with mental health providers than use other strategies if children had coexisting mental health problems or if providers had stronger beliefs about psychosocial aspects of care. These results do not support the hypothesis that children with more severe behavioral problems are transferred to

specialists but suggest that primary care and mental health care clinicians may benefit from collaborating on treatment plans.

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Ethnic and Regional Differences in Primary Care Visits for Attention-Deficit Hyperactivity Disorder

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The ethnic and regional differences in primary care visits for children regarding the frequency of attention-deficit hyperactivity disorder (ADHD) diagnoses, stimulant prescriptions, and other mental health diagnoses were examined. The authors analyzed 6 years (1995-2000) of data from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey and found that an ADHD diagnosis and/or a stimulant prescription were less likely to be recorded during visits by Hispanic-American youths relative to visits by white-American youths. The authors also found that stimulant prescriptions were given more frequently for visits of children with ADHD in the south and west than in the northeast. Finally, no ethnic differences were found in the likelihood of receiving a psychotropic medication once an ADHD diagnosis was given or receiving a mental health diagnosis other than ADHD. Ethnic disparities in primary mental health care appear to exist for ADHD and not for other mental disorders pooled together.

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Evolution of Child Mental Health Services in Primary Care

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OBJECTIVE: Although the importance of mental health assessment and treatment in primary care is increasingly recognized, the research that underlies current practices largely stems from a considerable body of non-mental health primary care studies. Our purpose was to describe trends in research over the past 2 decades and to suggest further key items for the research agenda.

METHODS: We reviewed the literature broadly on health services research in pediatrics, especially studies of changes in primary care practice, and examined recent articles in primary care mental health services.

RESULTS: The evolution of primary care mental health services for children has been slow, but the focus of research has changed with the development of clinical improvements. Proposals to deliver more effective services have evolved over the past 40 years in a series of approaches that paralleled initiatives in the broader fields of medicine and pediatrics. Current trends in electronic technology, practice consolidation and coordination, and personalized medicine are likely to increase the pace of change in mental health services for primary care.

CONCLUSIONS: The evolution of pediatric mental health services in primary care suggests a continuing expansion from a focus initially on provider behavior and quality to a growing attention to patient and systems' behavior over time and within communities.

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Follow-up Care of Children Identified with ADHD by Primary Care Clinicians: A Prospective Cohort Study

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OBJECTIVE: To document follow-up care received by children identified with attention deficit hyperactivity disorder (ADHD) by primary care clinicians (PCCs).

STUDY DESIGN: We surveyed families of children 4 to 15 years of age who had been diagnosed with ADHD. At an index office visit, parents and clinicians completed questionnaires. Six months after the index visit, parents completed a questionnaire (N = 659 returned surveys, 68% return rate). The main outcome measure was the number of visits with the patients' PCCs or mental health specialists during the 6 months after the index visit.

RESULTS: Children had a median of one visit PCC over a period of 6 months. Children who had prescriptions for psychotropic medications (78%) did not differ from others in the number of visits. Follow-up visits with the child's own doctor were more common when the PCC had completed mental health training. Only 26% of patients saw a mental health specialist. Children who were black, on Medicaid, or with higher levels of internalizing symptoms were more likely to see a mental health specialist.

CONCLUSIONS: Children treated for ADHD need more follow-up visits to permit adjustment of medication and support continuation of patients in treatment. Systematic quality improvement efforts are warranted.

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Guidelines for Adolescent Depression in Primary Care (GLAD-PC): I. Identification, Assessment, and Initial Management

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OBJECTIVES: To develop clinical practice guidelines to assist primary care clinicians in the management of adolescent depression. This first part of the guidelines addresses identification, assessment, and initial management of adolescent depression in primary care settings.

METHODS: By using a combination of evidence- and consensus-based methodologies, guidelines were developed by an expert steering committee in 5 phases, as informed by (1) current scientific evidence (published and unpublished), (2) a series of focus groups, (3) a formal survey, (4) an expert consensus workshop, and (5) draft revision and iteration among members of the steering committee.

RESULTS: Guidelines were developed for youth aged 10 to 21 years and correspond to initial phases of adolescent depression management in primary care, including identification of at-risk youth, assessment and diagnosis, and initial management. The strength of each recommendation and its evidence base are summarized. The identification, assessment, and initial management section of the guidelines includes recommendations for (1) identification of depression in youth at high risk, (2) systematic assessment procedures using reliable depression scales, patient and caregiver interviews, and Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition criteria, (3) patient and family psychoeducation, (4) establishing relevant links in the community, and (5) the establishment of a safety plan.

CONCLUSIONS: This part of the guidelines is intended to assist primary care clinicians in the identification and initial management of depressed adolescents in an era of great clinical need and a shortage of mental health specialists but cannot replace clinical judgment; these guidelines are not meant to be the sole source of guidance for adolescent depression management. Additional research that addresses the identification and initial management of depressed youth in primary care is needed, including empirical testing of these guidelines.

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Guidelines for Adolescent Depression in Primary Care (GLAD-PC): II. Treatment and Ongoing Management

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OBJECTIVES: To develop clinical practice guidelines to assist primary care clinicians in the management of adolescent depression. This second part of the guidelines addresses treatment and ongoing management of adolescent depression in the primary care setting.

METHODS: Using a combination of evidence- and consensus-based methodologies, guidelines were developed in 5 phases as informed by (1) current scientific evidence (published and unpublished), (2) a series of focus groups, (3) a formal survey, (4) an expert consensus workshop, and (5) revision and iteration among members of the steering committee.

RESULTS: These guidelines are targeted for youth aged 10 to 21 years and offer recommendations for the management of adolescent depression in primary care, including (1) active monitoring of mildly depressed youth, (2) details for the specific application of evidence-based medication and psychotherapeutic approaches in cases of moderate-to-severe depression,

(3) careful monitoring of adverse effects, (4) consultation and coordination of care with mental health specialists, (5) ongoing tracking of outcomes, and (6) specific steps to be taken in instances of partial or no improvement after an initial treatment has begun. The strength of each recommendation and its evidence base are summarized.

CONCLUSIONS: These guidelines cannot replace clinical judgment, and they should not be the sole source of guidance for adolescent depression management. Nonetheless, the guidelines may assist primary care clinicians in the management of depressed adolescents in an era of great clinical need and a shortage of mental health specialists. Additional research concerning the management of youth with depression in primary care is needed, including the usability, feasibility, and sustainability of guidelines and determination of the extent to which the guidelines actually improve outcomes of youth with depression.

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In the Moment: Attitudinal Measure of Pediatrician Management of Maternal Depression

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OBJECTIVE: Pediatricians are in a good position to identify women who struggle with depression, but studies show low rates of pediatrician identification and management. It is likely that pediatricians' management of maternal depression may vary on the basis of their attitudes, but no instrument has been developed to measure these attitudes. We sought to develop a measure of pediatricians' attitudes about managing maternal depression and to identify characteristics associated with pediatricians' attitudes about managing maternal depression.

METHODS: We conducted a cross-sectional analysis of data provided by 651 practicing, nontrainee pediatricians (response rate 57.5%) surveyed through an American Academy of Pediatrics 2004 Periodic Survey. An exploratory principal components analysis was used to investigate the interrelationships among the attitudinal items. Multivariable linear regression was used to assess the adjusted associations between physician and practice characteristics and attitudes.

RESULTS: The attitudinal measure consisted of 3 subscales: acknowledging maternal depression, perceptions of mothers' beliefs, and treating maternal depression. Clinical approaches (eg, interest in further education on identifying or treating maternal depression) and training and work characteristics were significantly related to pediatricians' attitudes; patient characteristics (eg, type of insurance and ethnicity/race) were not significantly associated with pediatricians' attitudes.

CONCLUSIONS: We developed a measure to assess pediatricians' attitudes about managing maternal depression. The findings from this study can be used to develop and assess

interventions that improve pediatricians' attitudes about acknowledging maternal depression, perceptions of mothers' beliefs, and treating maternal depression.

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Management of Pediatric Mental Disorders in Primary Care: Where Are We Now and Where Are We Going?

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PURPOSE OF REVIEW: Pediatric mental disorders are among the most common disorders of childhood and are routinely seen in primary care. We review innovative management strategies, treatment technologies, and models of collaboration with behavioral health specialists in general medical settings. Our goal is to advance the integration of behavioral health services into primary care.

RECENT FINDINGS: The application of mental health interventions with proven efficacy holds great promise for youths with mental disorders. Unfortunately, traditional primary-care management of pediatric mental disorders is characterized by nonspecific counseling, low-dose prescribing, and referrals to specialty settings that are often not completed.

SUMMARY: The development, study, and refinement of new assessment and treatment technologies, supplemental treatments, and collaborative models of care delivery will be necessary to ensure more effective care for youths with mental disorders and their families. The promise of pediatric mental healthcare will not be fulfilled unless primary-care clinicians and behavioral health specialists forge new collaborative relationships that enhance the delivery of evidence-based care to affected children and their families.

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Multidimensional Adaptive Testing for Mental Health Problems in Primary Care

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OBJECTIVES: Efficient and accurate instruments for assessing child psychopathology are increasingly important in clinical practice and research. For example, screening in primary care settings can identify children and adolescents with disorders that may otherwise go undetected. However, primary care offices are notorious for the brevity of visits and screening must not burden patients or staff with long questionnaires. One solution is to shorten assessment instruments, but dropping questions typically makes an instrument less accurate. An alternative is adaptive testing, in which a computer selects the items to be asked of a patient based on the patient's previous responses. This research used a simulation to test a child mental health screen based on this technology.

RESEARCH DESIGN: Using half of a large sample of data, a computerized version was developed of the Pediatric Symptom Checklist (PSC), a parental-report psychosocial problem screen. With the unused data, a simulation was conducted to determine whether the Adaptive PSC can reproduce the results of the full PSC with greater efficiency.

SUBJECTS: PSCs were completed by parents on 21,150 children seen in a national sample of primary care practices.

RESULTS: Four latent psychosocial problem dimensions were identified through factor analysis: internalizing problems, externalizing problems, attention problems, and school problems. A simulated adaptive test measuring these traits asked an average of 11.6 questions per patient, and asked five or fewer questions for 49% of the sample. There was high agreement between the adaptive test and the full (35-item) PSC: only 1.3% of screening decisions were discordant ($\kappa = 0.93$). This agreement was higher than that obtained using a comparable length (12-item) short-form PSC (3.2% of decisions discordant; $\kappa = 0.84$).

CONCLUSIONS: Multidimensional adaptive testing may be an accurate and efficient technology for screening for mental health problems in primary care settings.

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Primary Care Clinicians' Use of Standardized Psychiatric Diagnoses

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OBJECTIVE: Treatment of child mental health (MH) problems should be informed by psychiatric diagnosis. Whether primary care clinicians (PCCs) use standardized psychiatric diagnostic criteria to direct the treatment of child MH problems is unknown. This study investigated PCCs' use of Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria during office visits.

METHODS: The data were obtained from 3674 children ages 4-15 years who were recognized as having one or more MH problems during office visits by clinicians participating in the Child Behaviour Study. Parents completed questionnaires before seeing the clinician. Clinicians completed a survey after the visit. The primary outcome was whether PCCs used standardized criteria to generate a diagnosis for children with recognized MH problems. **RESULTS:** Clinicians used DSM criteria in 23% of visits in which a psychosocial problem was recognized, and 57% of PCCs reported no use of DSM. DSM criteria were used most frequently (38% of visits) when PCCs reported attention problems. Medications were much more likely to be prescribed during visits when PCCs diagnosed using DSM criteria (63% of visits vs. 19% when criteria were not used). However, only 51% of psychotropic medication prescriptions were based on a DSM diagnosis.

CONCLUSIONS: Clinicians used standardized criteria infrequently, and primarily to diagnose attention problems.

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Primary Care Clinicians' Use of Standardized Tools to Assess Child Psychosocial Problems

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BACKGROUND AND OBJECTIVES: Children's psychosocial problems are prevalent but often inaccurately diagnosed. This study investigated primary care clinicians' (PCCs) use of standardized tools for psychosocial problems among children in whom they reported finding a problem.

METHODS: The data consisted of 21 065 unique visits by children ages 4 to 15 years in 204 practices. Parents completed questionnaires before seeing the PCCs, who completed a survey after the visit. This analysis included 3934 children who were recognized by PCCs as having one or more psychosocial problems. The primary outcome was the PCCs' usage of a tool to assess child psychosocial problems.

RESULTS: PCCs used a tool in 20.2% of visits where a psychosocial problem was recognized, whereas 50% of PCCs never used such tools. Tools were less likely to be used by female PCCs and family practitioners and were less likely to be used with girls and African American children. Tools were more frequently used with children with attention problems, during visits for psychosocial problems, and when the PCC knew about the problem before the visits.

CONCLUSIONS: PCCs use standardized tools infrequently to screen for, confirm, or monitor psychosocial problems.

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Primary Care Pediatricians' Roles and Perceived Responsibilities in the Identification and Management of Maternal Depression

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OBJECTIVE: To describe the attitudes and approaches of primary care pediatricians in the identification and management of postpartum and other maternal depression.

METHODS: A national survey of randomly selected primary care pediatricians reported their management of the last recalled case of postpartum or other maternal depression, barriers to care,

their attitudes about recognition and management, confidence in skills, and their willingness to implement new strategies to improve care.

RESULTS: Of 888 eligible primary care pediatricians, 508 (57%) completed surveys. Of these pediatricians, 57% felt responsible for recognizing maternal depression. In their last recalled case, respondents used an unstructured approach for identification based primarily on maternal appearance or complaints. When maternal depression was suspected, additional assessment of any kind was done by 48% of pediatricians. Although 7% perceived themselves to be responsible for treating maternal depression, pediatricians indicated they had an active role in 66% of cases in which they provided 1 or more brief interventions. The major barriers that were believed to limit their diagnosis or management were insufficient time for adequate history (70%) or education/counseling (73%) and insufficient training/knowledge to diagnose/counsel (64%) or treat (48%). Responses with cases involving maternal depression and the specific situation of postpartum depression were very similar. Forty-five percent were confident in their ability to diagnose maternal depression, whereas 32% were confident in their ability to diagnose postpartum depression. Nearly one fourth of pediatricians were willing to change their approach to identification. Pediatricians who felt responsible for recognizing maternal depression were more likely to assess more completely and intervene in cases as well as consider implementing change in their practice.

CONCLUSION: Pediatricians' current attitudes and skills that are relevant to maternal depression limit their ability to play an effective role in recognition and management. Future interventions need to address each of these issues. Educational efforts and new clinical approaches may be more effective with those who feel responsible and willing to change their approach to maternal depression.

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Primary Care Pediatricians' Roles and Perceived Responsibilities in the Identification and Management of Depression in Children and Adolescents

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OBJECTIVE: To describe primary care pediatricians' 1) approach to the identification and management of childhood and adolescent depression and 2) perception of their skills, responsibilities, and barriers in recognizing and managing depression in children and adolescents.

DESIGN AND METHODS: National cross-sectional survey of randomly selected primary care pediatricians that assessed the management of recalled last case of child or adolescent depression, attitudes, limitations to care from barriers and skills, and willingness to implement new educational or intervention strategies to improve care.

RESULTS: There were 280 completed surveys about child and adolescent depression (63% response rate). Pediatricians overwhelmingly reported it was their responsibility to recognize depression in both children and adolescents (90%) but were unlikely to feel responsible for treating children or adolescents (26%-27%). Those with most of their practice in capitated managed care were less likely to feel responsible for recognizing depression in either children or adolescents. Forty-six percent of pediatricians lacked confidence in their skills to recognize depression in children, and few of them (10%-14%) had confidence in their skills in different aspects of treatment with children or adolescents. Diagnostic, assessment, and management details for their last recalled case of depression in a child or adolescent were provided by 248 of these pediatricians. In addition to referring 78%-79% of the cases to mental health care professionals, 77% of pediatricians provided a wide range of brief interventions. Only 19%-20% prescribed medication. Major factors cited that limited their diagnosis or management were time (56%-68%) and training or knowledge of issues (38%-56%). Fewer pediatricians noted limitations due to insurer or financial issues (8%-39%) or patient issues (19%-31%). The 35% of pediatricians who were motivated to change their recognition and management of suspected depression were significantly more interested in implementing in the future a variety of new strategies to improve care.

CONCLUSION: Primary care pediatricians felt responsible for recognizing but not for treating child and adolescent depression. Although the lack of confidence and lack of knowledge and/or skills and time issues are major barriers that limit pediatricians in their treatment of childhood and adolescent depression, pediatricians varied in their readiness to change, with some being more willing to implement new strategies to care for depression. Educational and practice interventions need to focus on how to assist all pediatricians in diagnosis and to prepare these motivated pediatricians to manage depression in primary care settings.

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Primary Care Referral of Children with Psychosocial Problems

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OBJECTIVES: To examine primary care provider referral patterns for patients with psychosocial problems and to understand the factors that influence whether a mental health referral is made.

DESIGN: Secondary analysis of the Child Behavior Study data collected during 1994-1997 from background survey of providers, visit survey of providers and parents, and follow-up survey of parents.

SETTING: Two hundred six primary care offices in the United States, Canada, and Puerto Rico.

PATIENTS: Four thousand twelve of 21,150 patients aged 4 to 15 years in the Child Behavior Study with a clinician-identified psychosocial problem.

MAIN OUTCOME MEASURES: Referral for psychosocial problem at index visit and reported follow-up with mental health care provider within 6 months.

RESULTS: Six hundred fifty (16%) of 4012 patients with psychosocial problems were referred at the initial visit. In multivariate analysis, significant factors associated with likelihood of referral included patient factors (severity, type of problem, academic difficulties, prior mental health service use) and family factors (mental health referral of parent); however, none of the provider factors were significant. Clinicians reported frequent barriers to referral and mental health services in the general background survey; however, these factors were rarely reported as influences on individual management decisions. Only 61% of referred families reported that their child saw a mental health care provider in the 6-month period after the initial primary care referral.

CONCLUSIONS: Most psychosocial problems are initially managed in primary care without referral. However, referral is an important component of care for patients with severe problems, and many families are not effectively engaged in mental health services, even after a referral is made.

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Race, Quality of Depression Care, and Recovery from Major Depression in a Primary Care Setting

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Racial variations in the use of effective medical care and subsequent clinical outcomes have been identified for many medical conditions. Still, it is unclear whether racial variations in care and clinical outcomes exist for depressed primary care patients. Primary care patients presenting for routine treatment were screened for major depression as part of a study to disseminate a depression treatment guideline. Primary care physicians (PCPs) were informed of their patients' depression via an electronic medical record system and asked whether they agreed with the diagnosis. Treatment patterns and depressive symptoms over the following six-months were assessed by chart review and the Hamilton Rating Scale for Depression, respectively. Over a 20-month period, 8,944 African-American and Caucasian patients aged 18-64 were approached for screening. African-Americans were less likely to agree to undergo screening than Caucasians (83% vs. 88%; $P < .0001$), but those doing so were more likely to report mood symptoms (26% vs. 15%; $P < .001$). 204 patients, including 52 African-Americans (25%), met protocol-eligibility criteria and completed a baseline interview. Baseline sociodemographic and clinical characteristics, and PCPs' agreement rate with the depression diagnosis were similar. Although PCPs were less likely to counsel their African-American than Caucasian patients for depression ($P = .03$), this difference resolved after adjusting for education level, employment, and insurance status and we found no other variations in the depression care provided or in clinical outcomes

by race. We found little racial variation in either process measures or clinical outcomes for depression in our sample of African-American and Caucasian primary care patients.

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Recurrent Abdominal Pain, Anxiety, and Depression in Primary Care

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OBJECTIVE: The prevalence of psychiatric disorder in children and adolescents with functional recurrent abdominal pain (RAP) is unknown. Our aim was to determine whether RAP is associated with psychiatric symptoms and disorders, anxious temperament, and functional impairment in pediatric primary care.

METHODS: Children and adolescents who were 8 to 15 years of age, inclusive, and presented with RAP (N = 42) or for routine care in the absence of recurrent pain (N = 38) were identified by a screening procedure in pediatric primary care office waiting rooms and recruited to participate in a case-control study. Outcome measures were psychiatric diagnoses generated by standardized psychiatric interview administered blind to subject status and self, parent, and clinician ratings of child psychiatric symptoms, temperamental traits, and functional status.

RESULTS: RAP patients were significantly more likely to receive a diagnosis of a psychiatric disorder, with a categorical anxiety disorder in 33 (79%) and a depressive disorder in 18 patients (43%), and higher levels of anxiety and depressive symptoms, temperamental harm avoidance, and functional impairment than control subjects. Anxiety disorders (mean age of onset: 6.25 [standard deviation: 2.17] years) were significantly more likely to precede RAP (mean age of onset: 9.17 [standard deviation: 2.75] years) in patients with associated anxiety.

CONCLUSIONS: Youths who present with RAP in primary care deserve careful assessment for anxiety and depressive disorders. Future studies should examine treatments that are proved to be efficacious for pediatric anxiety and/or depressive disorders as potential interventions for RAP. Longitudinal, family, and psychobiological studies are needed to illuminate the nature of observed associations among RAP, anxiety, and depression.

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Screening for Childhood Anxiety Symptoms in Primary Care: Integrating Child and Parent Reports

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OBJECTIVE: Parents' concerns typically determine the focus of a primary care visit. This study examined which information is lost if child reports are excluded from screening for anxiety. It also explores the use in primary care of the Screen for Child Anxiety Related Emotional Disorders (SCARED) and the Pediatric Symptom Checklist (PSC-17).

METHOD: Two hundred thirty-six children (8-12 years 11 months) and their parents completed SCARED and PSC-17 before a primary care visit occurring during discrete periods between June 1999 and March 2001. **RESULTS:** Child reports yielded higher SCARED scores than parent reports (mean=18.12, SD=12.14 versus 14.43, SD=10.34, $p < .001$). Somatic/panic and separation anxiety accounted for 73.8% of the excess score from children's reports. The level of parent-reported symptoms did not vary with demographics. Female gender and younger age predicted greater excess reporting by children. Parent and child scores were moderately to highly correlated ($R=0.55$ total score; 0.40-0.58 subfactors).

CONCLUSIONS: There are discrete anxiety domains in which children's reports are likely to yield more information than that of parents. This phenomenon is almost entirely attributable to variations in the level of symptoms reported by children. Studies are needed to design brief screening procedures that integrate parent and child reports and carry age- and gender-adjusted thresholds.

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The Role of Care Location in Diagnosis and Treatment of Pediatric Psychosocial Conditions

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Racial differences in diagnosis and treatment of psychosocial conditions have been well documented. It is unclear if these differences represent variance in prevalence or are actually disparities in care driven by social factors, income-related differences, or differences in the actual location of care. We used 4 years of National Ambulatory Medical Care Surveys and National Hospital Ambulatory Medical Care Surveys as source for data on visits to private offices and hospital-based clinics. In addition to the standard practice of combining surveys across years, we used a "supersurvey" approach to combining the 2 distinct surveys. In our roughly 20,000 sampled visits, we confirmed the higher concentration of low-income children in visits to hospital-based clinics ($p < .001$), but saw no significant racial difference ($p = .104$). After controlling for race, income, and other demographics, we found that visits to hospital-based clinics were significantly more likely to include a diagnosis of depression (odds ratio [OR], 4.4; $p = .011$), but that there was no statistically significant difference in other psychosocial diagnoses.

Once a diagnosis is made, there is no evidence of differences in treatment or follow-up between office-based or hospital clinic-based providers. Our analyses support previously gathered evidence for differences in economic status of the clientele of private offices and hospital-based clinics. We surprisingly found visits to clinics to be more likely to include a depression diagnosis, but this may be an artifact of the data reflecting visits rather than patients. We found no evidence that treatment or follow-up is different for the disadvantaged who use clinics rather than private offices.

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Trial of Computerized Screening for Adolescent Behavioral Concerns

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OBJECTIVE: Injury risk, depressive symptoms, and substance use are the leading causes of adolescent morbidity and death. The goal of this randomized, controlled trial was to determine whether computerized screening with real-time printing of results for pediatricians increased the identification of these adolescent behavioral concerns.

METHODS: A total of 878 primary care patients 11 to 20 years of age participated in computerized behavioral screening (the Health eTouch system) in waiting rooms of 9 urban clinics. These clinics all served predominantly low-income patients. The clinics were randomly assigned to have pediatricians receive screening results either just before face-to-face encounters with patients (immediate-results condition) or 2 to 3 business days later (delayed-results condition).

RESULTS: Fifty-nine percent of Health eTouch respondents had positive results for ≥ 1 of the following behavioral concerns: injury risk behaviors, significant depressive symptoms, or substance use. Sixty-eight percent of youths in the immediate-results condition who screened positive were identified as having a problem by their pediatrician. This was significantly higher than the recognition rate of 52% for youths in the delayed-results condition.

CONCLUSION: Immediate provision of an adolescent's self-report of behavioral concerns to a pediatrician increased recognition of those problems, compared with the delayed provision of results.

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Using Technology to Enhance Prevention Services for Children in Primary Care

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Primary care is the principal setting for implementation of prevention services for children and their families. However, aspects of primary care practice and lack of patient adherence to therapeutic regimens that ultimately lead to lifestyle and behavior changes are barriers to the delivery of prevention services. The authors of this paper present descriptive information about how a web-based computer application is being used to assist physicians in a major medical center overcome some of these impediments. This information is presented in the hopes of generating discussion about the utility of computer based support for prevention services in primary care settings. Additional steps to optimize the care of patients are also described.

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